Stat and Data Analysis Names: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Activity 2.2 B: Histograms vs Boxplots \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Find a partner to work with. Turn in 1 paper for the two of you.

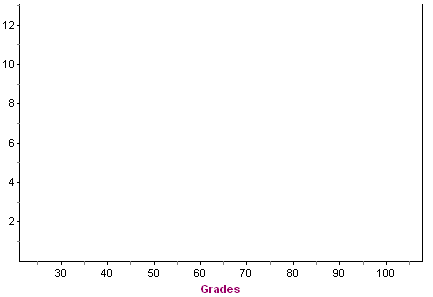
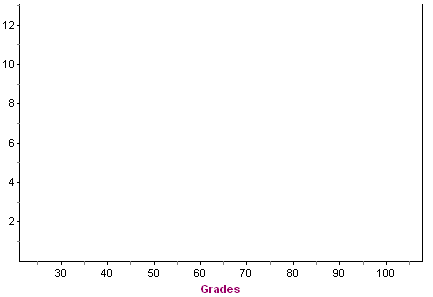
A teacher always gives the same quiz in her Geometry class. Below are the scores from the last three classes she gave the quiz to.

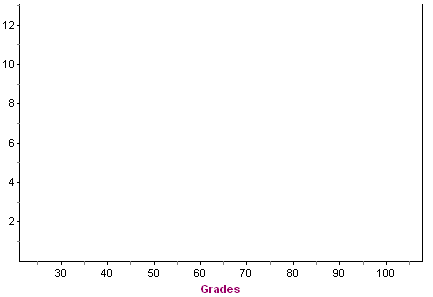
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Class A | | | | | |  | Class B | | | | | |  | Class C | | | | | |
| 55 | 67 | 56 | 48 | 58 | 56 |  | 66 | 72 | 39 | 81 | 98 | 69 |  | 87 | 91 | 77 | 68 | 85 | 91 |
| 78 | 87 | 78 | 89 | 59 | 59 |  | 44 | 58 | 59 | 78 | 69 | 72 |  | 88 | 87 | 79 | 65 | 77 | 86 |
| 91 | 81 | 79 | 61 | 66 | 67 |  | 88 | 74 | 68 | 74 | 68 | 62 |  | 70 | 75 | 88 | 96 | 98 | 82 |
| 55 | 44 | 56 | 69 | 65 | 44 |  | 82 | 63 | 75 | 56 | 78 | 79 |  | 99 | 49 | 89 | 79 | 85 | 73 |
| 60 | 45 |  |  |  |  |  | 61 | 78 | 61 | 80 |  |  |  | 87 | 94 |  |  |  |  |

Put the data into the lists in your calculator. Put the scores for Class A in L1, Class B in L2, Class C in L3.

1. Create the histogram for each class and copy them below. Make sure your Plot1 is set for a Histogram. The Plot1 should look like the screen shot below. To graph the other classes just change Xlist to L2 and then L3. Set the window as given below.



 Class A Class B Class C



1. Describe each histogram.

Class A: Class B: Class C:

1. Now use the calculator to create the boxplots. Draw each boxplot **below** the matching histogram.
2. Also, find the 5# Summary for each class and write it below.

Class A Class B Class C

min = min = min =

Q1 = Q1 = Q1 =

med = med = med =

Q3 = Q3 = Q3 =

max = max = max =

Range = Range = Range =

IQR = IQR = IQR =

1. Test for outliers in each class. Show work below, and any outliers you find.

Class A Class B Class C

1. What was the shape of the histogram of Class A? How can this be seen in the boxplot?
2. What was the shape of the histogram of Class B? How can this be seen in the boxplot?
3. What was the shape of the histogram of Class C? How can this be seen in the boxplot?
4. In general how can you see a symmetric distribution in a boxplot?
5. In general how can you see a skewed distribution in a boxplot?

Compare the IQRs of the three classes.

1. Which has the smallest IQR? How can this be seen in the histogram?
2. Which has the largest IQR? How can this be seen in the histogram?
3. What does the IQR tell you about the distribution of the data?